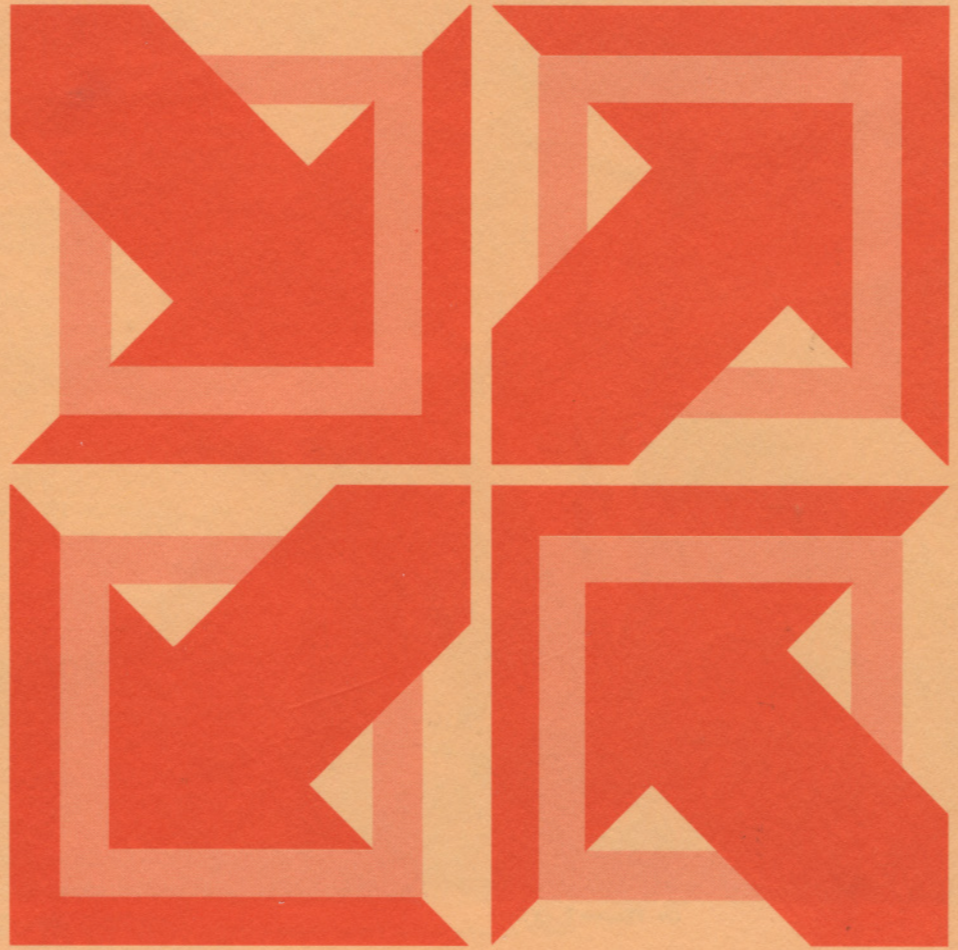


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1969
ANNUAL REPORT
EXTENSION SERVICE
Clemson University
Clemson, S. C.



Dr. Wayne T. O'Dell

Agriculture still is and will remain basic to our state's economy. In addition to production technology in commercial agriculture, Extension concentrates emphasis on two major areas, farm business management and marketing problems. And as specialized farms become larger and small farms decline, we will design our programs to fit the needs of differing sizes of farm business and types of specialization.

On the other hand, Extension is committed to serve the needs of all the people. And with constant organizational and program review, we hope to meet the social, scientific, and technological changes anticipated. More area agents and a specialist team approach will be necessary on specific commodity and area problems.

During the year priority was given to programs and assistance to the low-income farmer, emphasis being focused on group and community problems related to the environment of these people rather than on production techniques. Another area receiving special attention was community resource development. In expanding this program, Extension helped local planning groups and officials get the most effective planning, financing, and technical aid from all agencies so that low-income families could achieve better living individually and collectively. In helping families and communities raise their standard of living, Extension must draw upon the whole of Clemson University for leadership to guide and advise groups needing special assistance.

Extension also made special effort to help the disadvantaged obtain better nutrition, better health, and better living conditions through improved housing. Some 152 program aides were employed to work with these families in 14 counties, and by the end of the year noticeable improvements had been made in both nutrition and housing.

Extension programs will continue to undergo significant changes as needed to extend the educational effort to benefit all South Carolinians. Extension carries on the only adult education program representative of a university that maintains primary focus on practical everyday problems for those not interested in obtaining university credit and degree programs.

We believe the full and effective outreach of our land-grant universities can best be reached by preserving this type of practical education. And with the full commitment of the entire Extension staff, we will continue our broadened program role that extends beyond our customary realm of agriculture, home economics, and 4-H.



One of 125 new manure lagoons constructed in the state in 1969.

Management Boosts Farm Progress

Extension workers have helped farmers come a long way down the dynamic road to progress, first, by actually demonstrating the better methods of proper soil and fertilizer use and, presently, by emphasizing efficient management not only of soil but of the total farm resources as well. Each year the cost-price squeeze becomes tighter, and growers must use every effort to increase net income.

Our farmers have kept pace in the use of modern machinery, agricultural chemicals, and proved techniques to raise crop production levels, but with ever-encroaching industrial demands they must main-

tain increased production on shrinking farm acres. They must make decisions for the best use of all their available resources. By wisely using land, labor, capital, and managerial ability, however, today's farmer can command a profit in marketing high quality products and successfully compete with comparable businesses in other segments of the state's economy.

To keep the farm audience abreast of the latest management techniques in 1969, Extension agricultural economists released each month 49,000 copies of a leaflet entitled "Farm Situation and

This caged layer system houses 22,500 birds and has automatic water and feed system, egg gathering, lighting, and manure disposal.



Farmers in all areas of the state following a good forage management program produced adequate feed for their livestock enterprises.

Palmetto growers harvested a good crop of soybeans from 958,000 acres in 1969 — yields averaged 22.5 bushels per acre.



Outlook" throughout the state. They also conducted a Farm and Small Business Income Tax Course for tax consultants in cooperation with other agencies — some 300 attended the four tax workshops, participated in 31 county and 245 community outlook meetings which presented forecasts of farming costs and price prospects, and assisted 230 farmers in developing complete farm plans.

Farm economy no longer depends solely on a one-crop production, such as cotton, as it did in past years; however, cotton continues to fill a definite role in the farm scene. Because of unfavorable weather, the 1969 cotton crop was one of the lowest yielding of the decade. But in spite of the adverse weather, many farmers produced high yields of quality cotton on substantially reduced acreage.

Some 95 percent of the cotton crop stapled 1 1/16 inches or longer — a length preferred by most of the textile trade. Visits of Extension evaluators to cotton gins to advise and check on the quality lint program Extension promoted in the state were a major factor in helping produce this high quality.

Corn too suffered from the bad weather but nevertheless produced an average state yield of 47 bushels per acre, the second highest on record. Other major crops of tobacco, soybeans, and forage crops — although suffering bad weather effects — likewise produced high quality yields and sold for good prices.

The technique of subsoiling under the row before planting, liming according to soil test, planting adapted varieties, and using adequate fertilization, herbicides, and pesticides paid off in reasonably high yields of good quality crops. Most farmers now use these recommended practices as a regular procedure to help offset weather setbacks.



Through the all-breed bull sale and performance testing, beef cattle have been improved. Feeding beef cattle for slaughter is increasing in the state.

Our farmers can be proud their quality products are filling a need on state and national markets as well as in world trade. Yes, from our port at Charleston, more than one-fourth (dollar basis) of the agricultural products grown in South Carolina go to foreign markets. Our tobacco, soybeans, and cotton figure prominently in export trade.

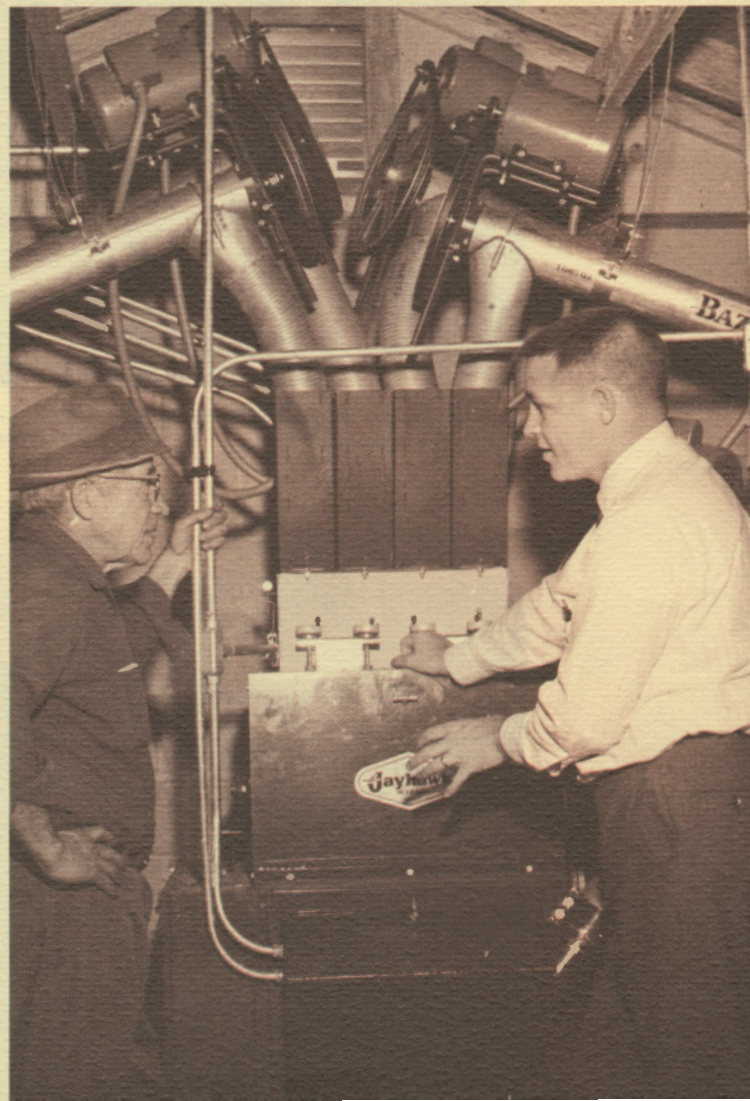
Our luscious peaches also continued to bring fame and favor to South Carolina in the marketplace. From the total marketing of the 1969 peach crop, Palmetto growers realized a little over 17½ million dollars. Apples too are becoming more important each year. Other horticultural crops — grapes, tomatoes, cucumbers — efficiently produced and marketed, the majority according to recommended Extension practices, added some 15½ million dollars to growers.

In addition, bedding plants, nursery stock, and cut flowers brought in 11 million dollars, and processed horticultural products added another 10 million dollars. Fruit and vegetable processing and production show considerable potential for further development in the state, and much Extension effort was devoted to ways to expand markets for processed products. Extension horticulturists feel that greater use of mechanization and irrigation by growers will entice more processing plants to the state.

Through mass media every homeowner in the state, who to some extent is concerned with lawns, flowers, shrubs, and shade trees, was benefited by the Extension ornamental program.

Farm labor continues to be scarce, and agricultural engineers are constantly working to develop machinery and equipment to offset the problem. The latest development at Clemson is a peach harvester, which performed capably in both commercial or-

Extension dairy specialist explains the best use of automated feeding equipment. More and more dairymen are automating their dairy operations to get the most efficient job done.



This caged layer system houses 22,500 birds and has automatic water and feed system, egg gathering, lighting, and manure disposal.



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The technique of subsoiling under the row before planting, liming according to soil test, planting adapted varieties, and using adequate fertilization, herbicides, and pesticides paid off in reasonably high yields of good quality crops. Most farmers now use these recommended practices as a regular procedure to help offset weather setbacks.



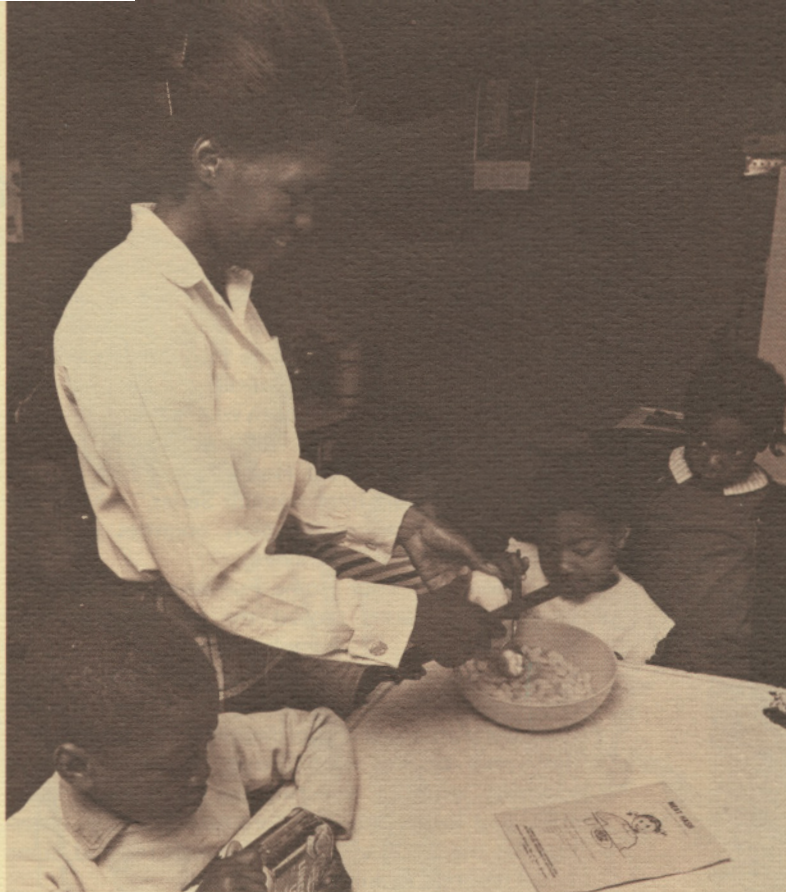
Soil fumigation demonstrations help growers to understand and cope with crop losses from plant parasitic nematodes.

every dollar's worth of agricultural products marketed annually by our farmers goes into the export market.

To help farmers strengthen their economic position and eliminate some of the risks in farming, Extension assisted with a wide variety of educational training programs — hedging schools, use of agricultural enabling legislation and the Information Filter Center. The hedging technique is now a standard tool in the farming business of many Palmetto cattlemen, swine producers, and grain merchants. Extension marketing information programs helped peach producers and marketing firms make important day-to-day decisions during the harvest season. Extension's Information Filter Center

program, which completed its fifth year, furnished projections of fresh peach and cucumber supplies to nearly 1,000 subscribers each week during the season for these crops.

Extension marketing specialists worked closely with commodity groups interested in developing marketing orders under South Carolina's enabling legislation. The first marketing order to become effective applied to soybean producers. These farmers voted to assess themselves one-half cent per bushel of soybeans marketed for a research, educational, and promotional program. Sweet potato producers also passed their marketing order in 1969, providing for a number of packaging, labeling, and marketing requirements.



Homemaker prepares a nutritious meat hash from an Extension booklet, which tells how to prepare tasty, nutritious, and economical meals.

Family Well-Being

With the instigation of the federal nutrition program in South Carolina early in the year, Extension home economists in 14 pilot counties were trained to select and supervise program aides to work with disadvantaged families in their neighborhoods. Through this local participation approach, the program gained momentum from its inception and has contributed substantially toward improving diets of many low-income families, which is the main objective of the program.

A major feature publicizing the program was a documentary film in color entitled "Knowledge — Not Money," which dramatically showed progress being made among disadvantaged families in the Beaufort-Jasper area. The film has made a tremendous impact on the thousands who have seen it in meetings or on TV, and numerous in-state and out-of-state requests attested to its popularity as an effective promotional tool.

Working with some 4,700 families, 150 program assistants showed how to prepare low-cost nutritious dishes, how to plan balanced menus, how to buy

groceries, how to clean house, how to garden. Although the program has met some stumbling blocks, we can say that we are "on our way toward improved living for many families." Furthermore an expanded work with youth to improve their health is scheduled in the 14 pilot counties in the near future.

The 32 counties not conducting the expanded nutrition program continued to expand their contact, however, with low-income families and other special clientele.

Satisfactory living for all families on all levels also includes adequate housing and furnishings as well as balanced diets. The demand for new homes and remodeling and repair of older homes is great as industry continues to expand, incomes increase, and early marriage brings more new households.

The Extension housing program focused on the problems of various clientele groups. County Extension workers reached these family groups through housing schools and workshops, homemakers' clubs, 4-H clubs, home visits, literature, and mass media — and in doing so they helped 6,000 families obtain

Beaming 4-H girl gives her winning dairy foods demonstration during State 4-H Conference at Clemson.



better housing by helping them select adequate house plans, materials and utilities, good construction features and lighting, and sources and costs of available financing. Some 2,000 of these in the low-income area were helped to improve existing housing or obtain new homes.

Intensive training in home furnishings was given home economists in 26 counties on how to reach young homemakers and youth whom they felt would benefit most from this information. Two short courses, "More for Your Home Furnishings Dollar" and "Youth Home Improvement Series," which were developed and tested in pilot counties in 1968, formed the basis of the training.

"More for Your Home Furnishings Dollar" for young homemakers proved the more popular and successful, and 12 complete short courses were conducted with an enrollment of some 300. Some of the improvements the young homemakers made included planning and coordinating color schemes for one room all the way through the entire house; restoring furniture; selecting and constructing draperies; and wisely selecting furniture and floor coverings. Of the 2,700 young homemakers reached, some 1,200 reported making improvements.

The Extension clothing program, another successful consumer education program, helped families manage their clothing dollars wisely. The social-psychological aspect of clothing was given particular concern as the Extension home economists counseled families, especially those with low incomes, on ways to get the most for their money.

Clothing workshops and schools showed consumers how to select clothing based on personal needs, wants, and resources whether they bought the clothes outright or materials to make them. The most popular youth and adult program in this area dealt with clothing construction. Along with selection and construction, the clothing program stressed proper care of clothes for a good appearance.

Two years ago boys 12-19 began to participate in a 4-H boys' clothing project, a new aspect of the Extension clothing program. It allows urban, suburban, and rural boys of high-, medium-, or low-income status to take part. In 1969 eight county boy winners 14 years or over were selected to attend the State 4-H Conference at Clemson.

In our modern complex society we know that all families need adequate food, clothing, and housing. But a little spice thrown in makes daily associations more compatible. To satisfactorily cope with pressures, tensions, and demands every day, we need inner resources. The Extension family life program informed families how to recognize and understand social forces changing established family patterns of



Clothing girls get last-minute tips before donning the dresses they made to demonstrate in the dress revue at State 4-H Week.

bygone days so that the family unit can maintain composure and strength in today's hectic world.

Pooling resources to achieve family goals; teaching youth how to prepare for strong, enduring marriages; understanding tension and how to cope with it; explaining the world of the adolescent; child care; and the role of the family in the middle and later years were some of the objectives promoted by the Extension family life program.

Through meetings, home visits, and individual conferences, nearly 600 young marrieds, some 1,800 middle-income families, nearly 600 senior citizens, some 800 low-income clientele, and over 6,000 4-H'ers reported changes in behavior from these family life lessons.



Extension helped many families living in sub-standard houses obtain better places to live.



Program assistants in the expanded nutrition program in Florence County learn meal preparation by actually preparing and serving a meal.

Agricultural Communications Support Total Extension Program

The Department of Agricultural Communications coordinates work of Extension specialists and researchers and routes information through press, television, radio, movies, exhibits, and publications. Thus each citizen in the state has an opportunity to take advantage of this information to improve individual or total resources.

Through two news packets issued twice weekly, the department released 267 news stories giving helpful information on the farm, home, and outdoors, as well as three feature-type columns weekly. Five radio programs and two television programs are also released weekly to radio and TV stations, most of which use these programs regularly.

Extension publications served as textbooks or sources of supplementary information for specialists in agriculture, home economics, and 4-H. They also supported statewide programs receiving special emphasis, such as the cotton program and marketing information.

A special insect and plant disease photographic project, which involved making some 1,200 color photos of insects and plant diseases, was completed in 1969 in cooperation with Extension entomologists and plant pathologists. This project was made possible by a grant from the Federal Extension Service. Four hundred of the pictures were made into a slide set which was distributed to each state.

Two 30-minute films, "Fiber Testing — The Key to Improved Cotton Marketing" and "Snapbeans for Processing," were completed, along with four color films for use on television. Nearly 92,000 persons saw a total of some 2,800 showings of films or slides.

Three exhibits made in the department were viewed by over 500,000 people during the year. In addition, local area and county Extension workers provided information and assistance to thousands of South Carolinians through office and home visits, phone calls, circular letters, radio and television programs, and meetings.

4-H Youth Program Trains Future Leaders

The Extension 4-H program in 1969 tried to reach a larger number of youth between 9 and 19 by using new methods and educational techniques. For Extension youth specialists are aware that the training we give our youth today forms a strong moral background for serving as tomorrow's leaders.

Through the 4-H program young people learn to develop their leadership talent, strengthen character and citizenship traits as well as broaden their knowledge of agriculture, home economics, and related areas of family and community living.

To help reevaluate and institute a more modern 4-H training program in the counties, some 94 county personnel attended a 4-day workshop during February supervised by the state 4-H staff. Some topics discussed were — Needs of Boys and Girls, Understanding Ourselves as Adults in Working with Youth, the Need for Education in a Changing Society, New Dimensions in 4-H Programs, 4-H Volunteer Leadership Development and Programming for Low-Income Youth.

Work was also begun early in the year in 14 counties in the expanded food and nutrition educational program with low-income youth to provide them information on better nutrition, health, and related areas. Youth is an important audience in this program, as they influence both the diets of their families and their own health and well-being.

Other innovative programs were launched in 1969 to reach more youth from all income levels and geographic areas, and the program continues to expand into nonfarm, suburban, and urban areas. This group now composes 64 percent of the total 4-H enrollment. Projects especially adapted for this group include dog care and training, electric, horse, automotive, woodworking, photography, safety, and child development. New 4-H literature was aimed at motivating this nonfarm group and also special-interest groups.

Four of South Carolina's outstanding 4-H'ers in leadership ability attended the National 4-H Con-

ference in Washington in April. They took part in consultation groups which discussed such topics as Reaching the Unreached, the 4-H Image, Youth and Community Development, International Understanding and Human Behavior-Motivation.

In addition to the regular summer camping program, two special-interest camps were scheduled — 4-H dairy and livestock camps, which featured instruction on grading, feeding and management, fitting and showing, and conservation camp, which taught all phases of conservation.

Some 650 county 4-H winners attended State 4-H Conference in July at Clemson, where they received additional leadership and project training, and 32 4-H'ers who excelled in project and activity work represented South Carolina at the National 4-H Congress in Chicago.

Power companies in the state cooperated with Extension agricultural engineers in hosting the State 4-H Electric Congress, an annual event which some 100 4-H'ers attend.

Programs to help youth explore careers and improve employability are filling a real need. The 4-H manual "Let's Explore Your Career" was widely used with 4-H and other youth groups. A careers program, reaching more than 700 students, was presented by the Kershaw County Extension staff at the local junior and senior high schools. Over 4,000 youth were enrolled in some type of personal development program.

Over 500 4-H'ers were enrolled in special citizenship and public affairs education programs; 528 took part in emergency preparedness and civil defense programs. Spartanburg county conducted a citizenship program to help 4-H'ers appreciate their American heritage.

The 4-H program throughout the state was strengthened greatly by some 2,000 adult leaders who voluntarily gave their time to guide, counsel, and work with 4-H'ers in carrying out their various projects and in developing a background of meaningful skills and character-building experiences.



The Extension 4-H program attempts to reach all youth between 9 and 19 with informal instruction — in such subjects as better nutrition and health improvement — that supplements public school education.

Four H'er demonstrates his electric project at State 4-H Electric Congress.



Innovative programs helped Extension reach more youth from all income levels with helpful information for better living.

County 4-H winners at the State 4-H Electric Congress in Florence go Hawaiian at the luau (banquet).



Because of their interest in conservation, these 4-H boys were selected to attend 4-H conservation camp to further their training.



Forestry is a popular project with many 4-H'ers. They learn timber thinning and other forestry practices from their leader.



Nematodes are extracted from the soil, identified, and control recommendations made as an Extension service to growers.

Throughout 1969, as in the past 40 years, Extension has made every effort to reduce the use of chemicals where justified or to use alternative methods combating pests wherever possible. So far neither our scientists nor our farmers have yet found how to produce quality food and fiber crops without pesticides. During the year a special university pollution action committee was formed. More will be heard from this committee in the future.

In November a widely attended Regional Chemical Applicators School, one of many planned nationally, was held at Florence to promote safe use of all chemicals in our environment.

Throughout the crop season, Extension conducted surveys for various crops to help identify pest problems and use the safest, most economical way to combat them with chemicals. Surveys are important

Managing Our Environment

Environmental pollution and how to reduce it or cope with it has become a problem and concern from the metropolitan areas to the rural sections, where pesticides particularly have been under attack by ecologists because harmful residues have polluted both soil and water.

Pollution is not a new subject to our farmers, who for many years have worked to improve overall environmental quality by carrying out conservation measures that reduce pollution. For example, seeding soil conservation crops, which farmers have long done, has provided scenic and recreational benefits for all and at the same time has kept the soil where it belongs instead of eroding and silting into rivers, waterways, and watershed reservoirs.

Extension too has long been concerned with conservation of natural resources as well as the safe use of all farm chemicals and pesticides to prevent soil and water pollution. When the new types of organic chemicals were first recommended, Extension specialists emphasized correctly using them to eliminate the danger to both people and environment. In fact, one of the very first pesticide residue committees in the nation was established at Clemson in 1947 to safeguard farm products from harmful residues.

because they help determine just how much pesticide is needed to cope with a specific insect or disease problem.

Extension also promoted its pesticide safety program through statewide distribution of "Chemical Use Notes," which issued current information at regular intervals; county pesticide committees in each county; schools for chemical applicators; a chemical information center; weekly conferences; and publications. Monitoring pesticide residues in relation to recommended control programs is a much neglected field, but special attention was given to turkeys and soybeans in 1969.

A new phase of the Extension pest control program was setting up a laboratory to process soil samples to detect nematodes, which annually cost growers some several million dollars.

Wise use and management of our forests as well as our soils is mandatory in our rapidly increasing population, which must have housing and food, along with clean air and water. More than a third of all commercial forest land in the state is farmer owned.

Realizing the importance of the farm woodlot as a source of forest products, Extension foresters work mainly with these small, privately owned, non-industrial forests to make them produce more



Four-H'ers study forest management at summer 4-H camp session.

for the Good of All

efficiently and to help owners effectively market their wood products. When a severe ice storm hit some 20 counties in February, Extension foresters, working with cooperating agencies, helped owners satisfactorily salvage much of their damaged timber stands.

During 1969 new wood-using plants locating in the state have strengthened the market outlook for forestry products and helped to create new job opportunities for many of our citizens. Chip and lumber plants were constructed at Varnville, McCormick, and Ninety Six; a flakeboard plant at Greenwood; a pine lumber and chip plant at Monetta; and a lumber manufacturing plant at Denmark. This expanded manufacturing capacity will assure woodland owners of additional marketing alternatives in the years ahead.

When communities or counties make use of all their resources, including human resources, they not only create job opportunities but also improve living conditions by solving many environmental problems. Successful community and resource development has been an integral area of Extension promotion for many years.

In 1969 a 4-day Extension workshop to train county agents concentrated in depth on total

resource development in each county and emphasized coordination with other agencies. Through the efforts of development groups, five recreational facilities serving over 5,000 members were established. And some 9,500 miles of rural water lines servicing 14,800 people were completed in the state during the year.

Also six new counties — Cherokee, York, Lancaster, Chester, Fairfield, and Union — received planning assistance from Extension specialists. Williamsburg and Aiken Counties received a \$59,000 planning grant, and the S. C. Council on Higher Education received \$150,000 technical grants for business development. Allendale and Barnwell Counties received loans and grants totaling nearly \$1,200,000 for sewer and water systems. Extension provided educational leadership and organizational guidance to all these resource development groups.

The goal of each local county development group is essentially the same — to build a better rural South Carolina by providing a richer environment and expanded opportunity for all. And Extension's goal is to have 100-percent participation in this program by implementing a county-wide total resource development committee in each county to foster a more satisfying life for all South Carolinians.

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| E. V. Jones | Assistant Extension Specialist (Horticulture) |
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